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A new species of the genus *Lissopogonus* Andrewes from northern Borneo

(Insecta, Coleoptera, Carabidae, Patrobinae)

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Lissopogonus borneensis, spec. nov. from Sabah and Brunei, northeastern Borneo, is described. The species is distinguished from the four described species (*glabellus* Andrewes, 1923, *poecilus* Andrewes, 1933, *suensoni* Kirschenhofer, 1991, and *tonkinensis* Zamotajlov & Sciaky, 1996) by the combination of uniformly dark colouration, rather depressed, laterally evenly convex elytra, and differently shaped aedeagus.

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Introduction

Within carabid material recently collected by W. Schawaller, Staatliches Museum für Naturkunde, Stuttgart (SMNS) in Sabah, northeastern Borneo, I detected a fairly large series of an apparently undescribed *Lissopogonus* species. Later I received several specimens through courtesy of Mr. D. Wrase, Berlin, which were collected in different parts of Sabah and in Brunei.

This genus of rather strangely shaped ground beetles was so far known from four species, namely *L. glabellus* Andrewes, 1923 from the southern part of the Himalayas to northern Laos, *L. poecilus* Andrewes, 1933 from Java, *L. suensoni* Kirschenhofer, 1991 from eastern China, and *L. tonkinensis* Sciaky, 1996 from North Vietnam. From Borneo, thus far no records were available.

Although originally described as a genus of Pogoninae, *Lissopogonus* has been recently transferred by Zamotajlov & Sciaky (1996) to Patrobinae – with fairly good reasons, as I believe. However, as both authors already stated, its position is quite isolated within Patrobinae, and perhaps the genus requires an own subgroup.

Perhaps all *Lissopogonus* are mountain living beetles, though at least the newly described species mentioned in this paper apparently lives at rather low altitude. Generally, very little is known about habits and way of life of any species. Not even the altitude range is known, because in the descriptions rarely any indication to altitude is noted. Most probably, species of *Lissopogonus* are ground living inhabitants of the forest floor of montane (rain) forests.

Measurements

Measurements have been made under a stereo microscope by use of an ocular micrometer. length has been measured from apex of labrum to apex of elytra. Measurements, therefore, may slightly differ from those of other authors.

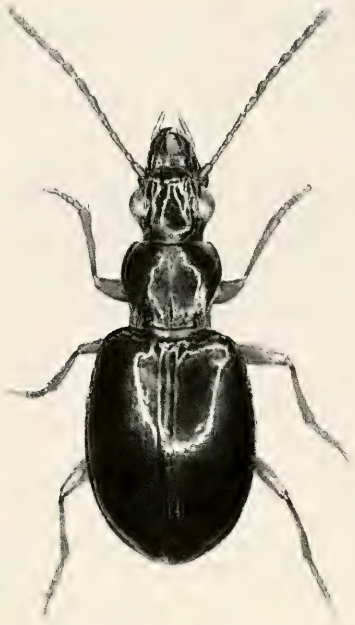


Fig. 1. *Lissopogonus borneensis*, spec. nov. Habitus. Length: 5.1 mm.

Material and Methods

Altogether 41 specimens of the new species were available for this study. For the taxonomic treatment standard methods were used. The genitalia were removed from specimens soaked for a night in a jar under wet atmosphere, then cleaned for a short while in hot KOH.

The material is shared between Staatliches Museum für Naturkunde, Stuttgart (SMNS), collection D. Wrase, Berlin (CWR), and the working collection of the author in Zoologische Staatssammlung, München (CBM).

Genus *Lissopogonus* Andrewes

Lissopogonus Andrewes, 1923: 213; Andrewes 1926: 68; 1933: 275; 1935: 314; Kirschenhofer 1991: 9; Zamotajlov & Sciaky 1996: 40.

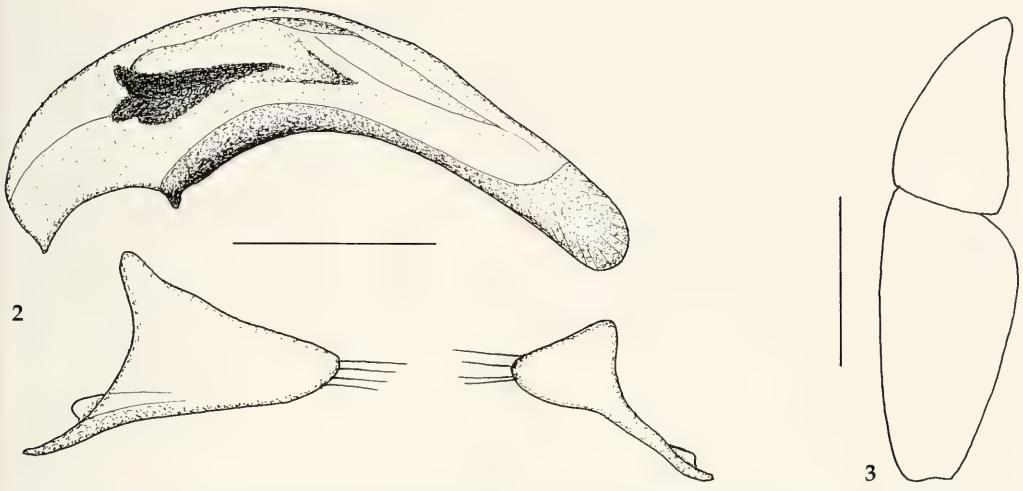
Extensive diagnoses of this genus are to be found in Andrewes (1923, 1935). Zamotajlov & Sciaky (1996) transferred the genus from Pogonini to Patrobini, though at the same time called in question, whether simple arrangement within Patrobinae conforms to the many special characteristics of the genus.

Lissopogonus borneensis, spec. nov.

Figs 1-3

Types. Holotype: ♂, BORNEO: SABAH, Bingkor N Keningau, 400-500 m, 19.-20.XI.1996, leg. W. Schawaller (SMNS). – Paratypes: 8♂♂, 10♀♀, same data (SMNS, CBM); 1♂, 4♀♀, BORNEO: SABAH, Bingkor N Keningau, 400-500 m, at light, 20.XI.1996, leg. D. Grimm (SMNS); 7♂♂, 5♀♀, BORNEO, BRUNEI, Temburong Kuala Belalong R. Borcherding leg./ 10.II., 11.II., 11.-16.3., 13.V., 29.V., VI-VII. 1995 (CBM, CWB); 2♂♂, 3♀♀, MALAYSIA – Sabah prov. Banjaran Crocker Mts. 15 km SW Gunung Alab 4-9.V.1996, alt. 790-850 m M. Strba & R. Hergovits leg. (CWB).

Diagnosis. Distinguished immediately from *L. glabellus* Andrewes and *L. poecilus* Andrewes by absence of any colour pattern on the elytra; from *L. tonkinensis* Zamotajlov & Sciaky by regularly convex elytra with much less distinct striation at apex; and from *L. suensoni* Kirschenhofer by longer elytra and less suddenly bent apex of aedeagus.



Figs 2, 3. *Lissopogonus borneensis*, spec. nov. ♂ and ♀ genitalia. **2.** Aedeagus from left, parameres. Scale: 0.25 mm. **3.** Stylomere 2 and base of stylomere 1. Scale: 0.1 mm.

Description

Measurements. Length: 4.6-5.1 mm; width: 1.9-2.05 mm. Ratios. Width/length of pronotum: 1.13-1.16; width base/apex of pronotum: 1.09-1.12; width pronotum/head: 1.08-1.12; length/ width of elytra: 1.42-1.47; width elytra/pronotum: 1.73-1.76.

Colouration. Black, sutural area of elytra more or less distincly dark reddish translucent. Mandibles, palpi, and antennae light brown, legs dark yellowish. Lower surface black or dark piceous.

Head. Slightly narrower than prothorax. Eyes comparatively large, laterally distinctly projecting, about 1.5 × as long as the oblique orbits. Clypeal suture superficially impressed. Frontal furrows slightly sinuate, laterally of furrow with a posteriorly widened field that is bounded on both sides by a carina. Neck constriction rather deep. Labrum transverse, anteriorly very gently excised, 6-setose. Mandibles moderately elongate, apically suddenly curved. Mentum with distinct, unidentate tooth. Antenna elongate, almost surpassing middle of elytra, median antennomeres >2 × as long as wide. Posterior supraorbital seta situated slightly behind posterior border of eye. Surface impunctate, without microreticulation, highly glossy.

Pronotum. Gently cordiform, slightly wider than long, in middle rather depressed, laterally evenly curved, basal angles rectangular. Widest diameter in anterior third. Base slightly wider than apex. Apex straight, apical angles feebly projecting, rounded off. Base very gently convex. Marginal channel narrow throughout, barely widened near basal angles, base and apex not margined. Median line deeply impressed, basally even deeper and wider. Base laterally with two punctiform impressions on either side. Basal grooves short, deep. Anterior marginal seta situated slightly in front of anterior third, posterior marginal seta slightly removed from basal angle. Surface impunctate, without any microreticulation, highly glossy.

Elytra. Moderately elongate, regularly curved, dorsally gently convex, widest at or slightly behind middle. Shoulders very obtusely dentate. Basal margin strong, sinuate, shortly interrupted near middle, connected to sutural stria. Scutellar striole and seta wanting. Only sutural stria distinct, impressed, impunctate. All other striae wanting on disk, or, in some specimens, finest traces of inner striae visible under high magnification. Short remnants of 2nd and 7th striae visible at apex. Marginal channel narrow throughout. A single setiferous puncture situated at position of 3rd interval, in middle. Marginal pores inconspicuous, about 12 in a row that is slightly interrupted in middle. Surface impunctate, without any traces of microreticulation, highly glossy. Inner wings present.

Lower surface. Impunctate. Metepisternum c. 1.5 × as long as wide. Sternum VII in ♂ bisetose, in ♀ quadrisetose.

Legs. Without striking features. Two basal tarsomeres of male anterior tarsus slightly expanded and squamose.

♂ genitalia. Aedeagus moderately elongate, rather strongly though regularly curved, apex wide, remarkably stout, slightly foliaceous. Internal sac rather simply folded, with several short sclerotized plates near base. Parameres dissimilar in size and shape, both 4-setose at apex.

♀ genitalia. Both stylomeres asetose, very similar to those of *L. tonkinensis* as figured in Zamotajlov & Sciaky (1996, fig. 110).

Variation. Rather little variation noted, though distinctness of elytral striae fairly variable.

Distribution. Sabah and Brunei, northeastern Borneo. The few records demonstrate that this species has a fairly wide distribution.

Collecting circumstances. Barely known, type series collected between 400 m and 850 m.

Etymology. The name refers to the range in northern Borneo.

Remarks. The newly detected species is evidence of a rather wide though still fragmentated distribution of the genus *Lissopogonus* in southern and eastern Asia. At present the range of the genus extends from northern India in the northwest to eastern China in the east, and to Java and Borneo in the south. Because all species apparently are mountain living, this range must have been achieved by some mountain hopping, which is highly probable because all five known species apparently are fully winged. However, no flying activities of any species have been thus far recorded. Generally, habits and life histories of all species are very inadequately known.

Any considerations about phylogenetic relations and zoogeographic history of this genus seem premature, as long as the actual status of this enigmatic group is not settled. Even when admitted that *Lissopogonus* is better arranged near Patrobinae than in Pogoninae, inclusion into Patrobinae is not really satisfactory and the erection of a distinct group of same taxonomic level as Patrobinae might better adjust the true relationships. However, in that case the relations of both, Patrobinae and the *Lissopogonus*-group, with Psydrinae *sensu latu* which probably are closely related to Patrobinae (see Baehr 1999) have to be settled, before any biogeograpical questions can be started.

Key to the species of the genus *Lissopogonus* Andrewes

1. Elytra with distinct colour pattern ..... 2.
– Elytra without any colour pattern ..... 3.
2. Prothorax little wider than long; elytra with a single puncture. Southern slopes of Himalaya ..... *glabellus* Andrewes
– Prothorax almost a third wider than long; elytra with two punctures. Java ..... *poecilus* Andrewes
3. Elytra regularly convex, with indistinct striation at apex ..... 4.
– Elytra reversely oviform, with rather distinct striation at apex. North Vietnam ..... *tonkinensis* Zamotajlov & Sciaky
4. Elytra shorter and wider; apex of aedeagus narrower, aedeagus in apical third suddely turned down. Eastern China ..... *suensoni* Kirschenhofer
– Elytra longer and narrower; apex of aedeagus wider, aedeagus more evenly curved, apex not suddenly turned down (Fig. 2). Northern Borneo ..... *borneensis*, spec. nov.

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